



DAILY BUSINESS REVIEW

SPECIAL REPORT INTELLECTUAL PROPERTY

Biotech innovation flourishing in South Florida with Scripps boost

Commentary by Mark H. Mirkin

Although these last two recessionary years have caused a severe curtailment of seed and early stage financing transactions in the nation's biotechnology sector, biotech innovation has flourished in South Florida, which thanks to public subsidies entered the sector in a meaningful way only this millennium. The



Mirkin

region continues to build its biotech infrastructure to attract elite scientists.

South Florida's growth in critical human capital comes in part at the expense of mature biotech hubs where growth relies on the availability of start-up financing. In a

few years, such reliance will be a factor here as well. Till then, this nascent sector is privileged to develop with little heed to market forces.

Defining biotech innovation broadly as drug discovery, South Florida has experienced a rapid dramatic increase in the

number of institutions with scientists laboring to develop and discover molecules and compounds applicable to diagnostic, preventative and therapeutic agents. Clearly the most heralded of these institutions is Scripps Florida. As the first and still sole satellite of the Scripps Research Institute, a world-leading nonprofit independent research institution based in La Jolla, California, focused on fundamental biomedical research, Scripps Florida in Jupiter now has a staff of 365 with 36 faculty and directors and seeks to grow. It is one of only three national translational research high-throughput screening centers approved by the National Institutes of Health and received the first national NIH drug development grant.

Its scientists have more than 30 therapeutic candidates under development and are engaged in more than 30 collaborations, including projects with every Florida research university as well as with major pharmaceutical companies. It has spun out into the South Florida commercial sector a small handful of start-up companies, while giving rise to many biotech support companies poised to service the spin-outs.

SCRIPPS GROUNDSWELL

Indeed, my law firm, Carlton Fields, attracted me to South Florida from North Carolina's Research Triangle in part to provide legal services to biotech entrepreneurs. In the academic sector,

Palm Beach State College's biosciences program and biotech incubator arose as part of the Scripps groundswell. And Scripps Florida recently announced an agreement to participate in a joint doctorate-medical degree program with the new medical school at Florida Atlantic University.

The Scripps Florida impact on biotech innovation has resonated throughout South Florida and beyond. Its presence was the catalyst for Jupiter's attraction of the Max Planck Institute, Port St. Lucie's attraction of the Torrey Pines Institute for Molecular Studies and the Vaccine and Gene Therapy Institute as well as for Orlando's attraction of the Sanford-Burnham Medical Research Institute. The University of Miami's impressive trajectory in sponsored bioscience research and the marketing effort for its Life Science Park benefit significantly from the influx of brand name talent spurred by Scripps.

For better or worse, biotech innovation has largely been abandoned as a primary pursuit by pharmaceutical companies, becoming the pursuit of universities and research institutes, leaving pharma to focus on applied research.

Basic research from which biotech innovation is born is the critical initial rung on the ladder to disease diagnosis, prevention and cure. It is clean and knowledge-based and independent of any need for natural resources and therefore

eminently attractive for regional economic growth. However, it is difficult to calculate with precision a rate of return on an investment in basic research because of the lengthy time period between discovery and application. Still, it is hard not to notice that hundreds of biotech companies have arisen in the San Diego area, home of Scripps, and hundreds of biotech companies have arisen in Germany's Bavaria region, home of Max Planck.

FUNDING GAP

Research institutes and universities have limited resources. Their scientists must seek and obtain government funding for sustenance. When the research shows promise for a particular application, government funding can be supplemented by private and public foundation funding; many of the well-known diseases have foundations devoted to their prevention and cure with budgets for funding innovative drug candidates.

Industry grants flowing from pharmaceutical companies is an increasing trend as they seek to get a hook at an

BIOSCIENCE BOOM IN WAKE OF SCRIPPS FLORIDA

- Life Science Park, Miami
- Max Planck Institute, Jupiter
- Sandford-Burnham Medical Research Institute, Orlando
- Torrey Pines Institute for Molecular Studies, Port St. Lucie
- Vaccine and Gene Therapy Institute, Port St. Lucie

early stage into promising technologies — or sometimes as a blocking tactic. After that, investment capital must come from angel investors (both individual angels and angel funds) and early stage venture capital companies. But the prolonged recession has wounded the vitality of early-stage VC companies.

The gap between, on the one hand, the period when a discovery from a univer-

sity or research institute's lab progresses from government grant funding through perhaps foundation funding and into a private sector entrepreneurial company licensed by the inventor's institution to commercialize the invention as a spin-out — the process known as technology transfer — and on the other hand a company attractive as a financing candidate to VC companies has come to be known as Death Valley. It is at this stage that many promising innovations die for lack of financing.

South Florida has not yet reached anywhere close to the critical mass level of spin-outs for this gap to be of grave concern. Hopefully as the region builds its base, the economy will continue to right itself and investors will re-enter the marketplace and resume seed financing activities, supplanting public subsidies as the engine for sector continuity.

Mark H. Mirkin is of counsel in the West Palm Beach office of Carlton Fields. He focuses his practice on corporate and securities law with an emphasis on entrepreneurship and emerging growth companies.



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